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SYSTEMS AND METHODS FOR DETERMINING CONDITIONS OF ARTICLES AND METHODS OF MAKING SUCH SYSTEMS

Abstract of Disclosure

A system for measuring a condition of a turbine engine component comprises an assemblage of at least a film comprising an electrically conducting material disposed on a film of an electrically non-conducting material, the assemblage being disposed on a surface of the turbine engine component without removing material from the turbine engine component to compensate for thickness of at least one of the films. The electrically non-conducting material has a thermal expansion coefficient such that each of the films remains adhered to adjacent films through at least one cycle of extreme operating temperature. In addition, communication links can be provided to transmit the measurement representing the condition of the turbine engine to a remote user.

Figures